Algebra I Teachers' Perceptions of Teaching Students with Learning Disabilities

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Abstract

Although numerous studies have focused on teachers' perceptions of inclusion, there is a scarcity of subject-specific research on their perceptions of a specific disability. In this study, 63 Algebra I teachers in 27 school districts in Alabama were surveyed to uncover their perceptions of teaching students with learning disabilities (LD) and factors that might affect these perceptions. The results indicated that Algebra I teachers do not have an overall favorable perception of teaching students with LD in inclusive classrooms. Collaboration with a special education teacher and the number of students with LD in the general education classroom were found to significantly contribute to Algebra I teachers' perceptions of teaching students with LD.

Introduction

The Individuals with Disabilities Education Improvement Act (IDEA, 2004) guarantees students with disabilities a free and appropriate education and requires that all students receive instruction in the least restrictive environment, which in many cases is the general education classroom. More recently, the No Child Left Behind Act (NCLB, 2001) significantly raised expectations for all students, including those with learning disabilities (LD). Concurrent with IDEA and NCLB, the National Council of Teachers of Mathematics (NCTM, 2000) has led the effort to reform mathematics teaching in the United States. This includes incorporating content and instruction that emphasizes higher-level mathematics including problem solving. These expectations are also recommended for teaching mathematics to students with special needs (Maccini & Gagnon, 2000). Currently, over 40 states have developed mathematics standards consistent with the recommendations of NCTM (Thurlow, 2000).

Between 5% and 8% of students have some form of disability that interferes with learning mathematics (Geary, 2004). For these students, the new mathematics standards present a formidable challenge (Gagnon & Maccini, 2001). This challenge is perhaps greatest in the 19 U.S. states that require students to pass Algebra I to receive a high school diploma (Reys, Dingman, Nevels, & Teuscher, 2007). According to results from the National Assessment of Educational Progress (NAEP), only 6% of the students with disabilities scored at or above the proficiency level in mathematics (National Center for Education Statistics, 2004). NCLB (2001) also requires that schools be held

accountable through state assessments to ensure all students meet these expectations, including students with special needs (Gagnon & McLaughlin, 2004).

Algebra poses a significant challenge to students with LD (Gagnon & Maccini, 2001; Steele & Steele, 2003). On average, the mathematical knowledge of students with LD progresses 1 year for every 2 years of school attendance and reaches a plateau after seventh grade (Cawley & Miller, 1989). Mathematics education of students with LD is often focused predominately on the development of computation skills (Carnine, 1997; Jones, Wilson, & Bhojwani, 1997). However, computation skills alone are insufficient to adequately prepare students for learning algebra. To be successful in algebra there are specific cognitive skills that students must acquire. For example, algebra requires high levels of abstraction, problem solving, and reasoning as well as a greater use of metacognition, visual/spatial perception, and generalization skills (Driscoll, 1999; Witzel, Smith, & Brownell, 2001). However, these are areas in which many students with LD struggle (Allsopp, Lovin, Green, & Savage-Davis, 2003; Freund & Rich, 2005; Mercer & Pullen, 2005). As a result, students with LD often have high failure rates in Algebra I (Jones et al.). If the failure rate in algebra for students with LD is to be reduced, it is ultimately the classroom teacher who will be instrumental in facilitating the success of these students.

Studies show that general education teachers have mixed perceptions of teaching students with disabilities. Van Reusen, Shoho, and Barker (2001) found that teachers who received more training in special education (SPED) had more positive attitudes toward inclusion. McLeskey, Waldron, So, Swanson, and Loveland (2001) stated that teachers with no experience in inclusive settings held more negative attitudes toward inclusion than the teachers with greater experiences with inclusion. In general, research indicates that general educators believe that students with disabilities have the right to be educated in the general education classroom (Semmel, Abernathy, Butera, & Lesar, 1991; Taylor, Smiley, & Ramasamy, 2003). However, research also shows that many general education teachers believe that they lack the training necessary to make inclusion successful (Buell, Hallam, Gamel-McCormick, & Scheer, 1999; Smith & Smith, 2000; DeSimone & Parmar, 2006), lack sufficient time to meet the needs of students with disabilities (Stahl, 2002), and believe that inclusion limits their planning and instruction time for the other students (Rose, 2001).

Research regarding mathematics teachers' attitudes toward inclusion is scarce. In exploring the attitudes of teachers in one mainstream secondary school in the United Kingdom, Ellins and Porter (2005) found that the teachers of English, mathematics and science had less positive attitudes about inclusion than their colleagues who taught foreign language, technology, humanities, physical education, and art. DeSimone and Parmar (2006) investigated middle school general education mathematics teachers' beliefs regarding inclusion and found that teachers had a limited understanding of the mathematical learning needs of students with disabilities. The mathematics teachers also believed that their teacher education programs and subsequent in-service education experiences did not prepare them for inclusion.

Teachers have a responsibility for the learning of *all* students in their classrooms. In order for students with LD to be successful in Algebra I, teachers must be perceptive to their needs and provide appropriate instruction. This is particularly important in states where Algebra I is required and comprises a major component of the high school graduation exam. Most studies of teachers' perceptions of inclusion are "generic"; that is, they do not look at specific subject areas, grade levels, or teachers' perceptions of a specific type of disability. However, Algebra I teachers face unique political pressures given that much of the weight of school accountability required by NCLB rests on their shoulders. Therefore, this study was designed to examine Algebra I teachers' perceptions. These background factors include: (a) years of teaching experience, (b) number of college courses taken that addressed teaching students with LD, (c) number of workshops attended that addressed teaching students with LD, (d) number of students with LD in the classroom, (e) highest degree earned, and (f) amount of collaboration with a special education teacher.

Method

Participants

The population of this study consisted of Algebra I teachers from 27 school districts in rural Northeast Alabama who were included in one of Alabama's 11 inservice regions. Each in-service region is served by one state university within that area which provides professional development to that region's K-12 teachers. Each school principal in the region was contacted and asked how many teachers in the school taught a form of Algebra I (e.g., Algebra IA, Algebra IB, Algebraic Connections, and Technical Algebra) that included students with LD. The schools were able to provide a list of 174 teachers who taught Algebra I, but were unable to determine definitively whether students with LD were in the classes. Therefore, all 174 teachers were sent the survey. Teachers who did not teach students with LD were asked to complete the demographic section of the survey only and return the survey. Four teachers who did not teach students with LD returned the survey; these teachers were removed from the population under study. Sixty-three of the 170 algebra teachers who taught students with LD returned the survey; their demographic information is included in Table 1.

| Table 1. Algebra | I Teachers | ' Demographics |
|------------------|------------|----------------|
|------------------|------------|----------------|

| Factor | Number | | |
|---------------------------------|----------|--|--|
| Teaching Experience | | | |
| 0-10 years | 26 (41%) | | |
| 11or more years | 37 (59%) | | |
| College Courses (addressing LD) | | | |
| 0-1 | 40 (63%) | | |
| 2 or more | 23 (37%) | | |
| Workshops (addressing LD) | | | |
| 0-1 | 19 (30%) | | |
| 2 or more | 44 (70%) | | |
| Students with LD in Classroom | | | |
| 0-5 | 31 (49%) | | |
| 6 or more | 31 (49%) | | |
| NR | 1 (2%) | | |
| Highest Degree Earned | | | |
| Bachelor's | 20 (32%) | | |
| Master's or higher | 43 (68%) | | |
| Collaboration with SPED Teacher | | | |
| At least once every two weeks | 44 (70%) | | |
| Less than twice per month | 19 (30%) | | |
| | | | |

Note. NR: Not Reported

Survey

The survey included background demographic questions, a 16-item Likert scale regarding teachers' perceptions of teaching students with LD, and an open-ended section where participants could provide additional comments concerning their teaching experiences with students with LD. Many of the survey items were adapted from the *Regular Education Initiative Teacher Survey* (REITS) (Semmel et al., 1991). The scale ranged from 4 to 1 (4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree). Validity was established in a two-part process. In the spring and summer of 2005, 44 middle and high school mathematics teachers not in the survey population critiqued an initial draft of the survey. Based on their recommendations, changes were made to the wording and format. The revised survey was then given to three university professors who had expertise in both mathematics and learning disabilities. Modifications to the wording of the survey were made independently during three rounds of review until a consensus was achieved and the experts recommended no more changes. To establish

reliability for the survey, a pilot study was conducted with 46 Algebra I teachers in two school districts not within the survey population and who had not critiqued an earlier draft of the survey. The Cronbach alpha coefficient for the survey used in the pilot study was .8708.

Data Collection

Since the researchers were unable to obtain a list of Algebra I teachers who taught students with LD in the 27 school districts, all 174 Algebra I teachers were sent a package that contained a consent letter, a cover letter that described the study, and how they would need to fill out the survey, a survey, and a self-addressed stamped envelope to return the survey. The cover letter asked teachers to complete the survey within 10 days and stated that their identities would be kept confidential. The surveys were coded using numbers based on the school district, the school itself, and the number of Algebra I teachers in the school to determine which schools might need to be contacted again to remind the teachers to fill out the survey. Algebra I teachers who did not teach students with LD were encouraged to complete the demographic section only and return the survey. In addition, for teachers returning their survey, a drawing was held to select five teachers to receive a \$50 gift certificate. A follow-up survey packet was mailed 2 weeks later asking teachers to complete the survey if they had not yet done so.

Sixty-three of the 170 algebra teachers who taught students with LD returned the survey with 28 responding to the open-ended section. The response rate for the survey was 37%. Given that over 100 Algebra I teachers did not return the survey and without knowing what percentage of these teachers did or did not teach students with LD, the response rate of 37% is only a minimum return rate, and the return rate for Algebra I teachers who teach students with learning disabilities is likely to be higher. According to Ary, Jacobs, Razavieh, and Sorensen (2006), a 40%-75% response rate is a reasonable expectation for survey returns. Nonetheless, while the response rate for this study was slightly below what might be reasonably expected, it is comparable to that of a similar study by Maccini and Gagnon (2006) who had a 36% rate of return.

Data Analysis and Results

Teachers' Perceptions of Teaching Students with LD in Inclusive Classrooms

To analyze Algebra I teachers' perceptions of teaching students with LD in inclusive classrooms, descriptive statistics were used, supplemented by open-ended comments. Table 2 provides a summary of teachers' agreement with each of the 16 survey statements ranked from high to low by the mean. The full statements used in the survey are provided in the appendix.

Table 2. Teachers' Perceptions of Inclusion

(4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree)

| Item | Statement | Mean |
|------|--|-------|
| 1 | I feel comfortable collaborating with the special | 3.45 |
| | education teacher. | |
| 15 | I have primary responsibility for teaching all students | 3.37 |
| | (with or without LD) in my classroom. | |
| 12 | Students with LD have a basic right to be in the general education classroom. | 2.87 |
| 13 | I do not feel comfortable implementing personalized | 2.68 |
| | learning plans for students with LD.* | |
| 8 | I spend too much time on the behavior management | 2.68 |
| | problems of students with LD.* | |
| 5 | Special education teachers provide adequate support | 2.56 |
| | for students with LD in the general education | |
| | classroom. | |
| 16 | Students with LD feel a sense of belonging in the | 2.53 |
| | general education classroom. | |
| 2 | Inclusion improves the self-esteem of students with LD. | 2.27 |
| 3 | Achievement of general education students is not | 2.24 |
| _ | decreased by inclusion. | |
| 9 | General education teachers have the skills and | 2.24 |
| | knowledge to teach students with LD. | |
| 4 | Adequate resources exist for teaching students with LD | 2.23 |
| • | in the general education classroom. | 0.00 |
| 6 | Students with LD experience more academic success | 2.22 |
| - | In general education. | 0.04 |
| 1 | I ne time i can devote to state / district cumculum goals | 2.21 |
| 4.4 | decreases in inclusive classrooms." | 2.06 |
| 14 | Students with LD lose the slightes of dump, "different" or a "failure" in the general education | 2.00 |
| | | |
| 10 | Liassi ouili. | 2 0 2 |
| 10 | students with I D | 2.02 |
| 11 | My pre-service training prepared me to teach students | 1 82 |
| 11 | with I D | 1.02 |
| | | |

* These statements were reverse coded.

A majority of the Algebra I teachers had favorable perceptions, with an agreement level of 2.5 or higher, on 7 of the 16 survey items. Ninety percent of the teachers agreed that they were comfortable collaborating with the special education teacher. The most positive open-ended responses concerning collaboration came from Algebra I teachers who co-taught with special education teachers. One respondent

indicated that by teaching with a special education teacher, the academic performance improved for all students. Another teacher, who had 17 general education students and 12 students with LD in one class, stated that with a special education teacher in the classroom they were able to divide many of the classroom tasks such as lesson planning, grading papers, handling discipline problems, and contacting parents. The teacher wrote, "We have had a lot of success teaching students in Algebra I and almost all of them pass the high school graduation exam on their first attempt."

Ninety percent of the Algebra I teachers agreed that they had the primary responsibility for the achievement of all students (with and without LD) in their classrooms. Seventy-five percent agreed that students with LD had a basic right to receive their education in the general education classroom. One participant wrote, "I feel inclusion has been successful for a majority of the students and has helped some of the general education students who would normally struggle." However, another respondent disagreed and explained, "I am not convinced that the included classroom is the best place for these students since most of them work at a much slower pace than even the low level students." In other items with majority agreement, 62% of the algebra teachers were comfortable implementing personalized learning plans for students with LD and 60% agreed that students with LD did not cause behavior management problems.

Algebra I teachers had only slightly favorable perceptions on two of the survey items. Fifty-two percent of Algebra I teachers agreed that students with LD had a sense of belonging when placed in the general education classroom. Although there were no comments explicitly tied to belonging, one teacher expressed, "Teaching students with learning disabilities in my classroom is usually a good experience for the students and myself." However, another teacher stated, "Inclusion works for some students but not for others. In some cases, they are not capable of the material and stay confused most of the time. This makes them feel worse because they see the other students understanding and being successful."

Fifty-one percent of Algebra I teachers agreed that special education teachers provided an adequate amount of support for students with learning disabilities in the general education classroom. One teacher reported, "This is my second semester to teach with a special education teacher in Algebra. This has been a good experience; even though most of the teaching is my responsibility, she serves as a resource in the classroom. Both regular students and those identified as having a specific learning disability feel comfortable asking for and receiving help from either of us." However, another teacher commented, "It is my professional opinion that we desperately need special ed teachers that specialize in math. As general ed math teachers, we get tired of hearing special ed teachers say they can't help students because they don't know the material themselves."

Algebra I teachers indicated disagreement with 9 of the 16 survey items (mean < 2.5). Eighty-three percent of teachers disagreed that their initial teacher-training program adequately prepared them for teaching students with LD. Seventy-eight

percent of teachers reported that the stigma many students with LD experience of being "dumb," "different," or a "failure" was not reduced by inclusion. One of the respondents indicated that "... most [students with LD] feel like they are still the "dumb" kids because they are in a room with regular students, who most likely get the concepts the first time it is given."

Seventy-five percent of the teachers expressed that they did not have enough planning time to meet the needs of students with LD. In addition, approximately 60% of the teachers indicated when teaching students with LD, they did not have time to meet the state curriculum goals. According to one teacher, "With the pressure of graduation scores put on us by the state, it is difficult to make yourself slow down enough for students with learning disabilities to catch on." Another teacher wrote, "...although the time I devote to state goals may not decrease, I feel the depth and quality of teaching these goals decreases."

Approximately 60% of the teachers believed that (a) adequate resources for students with LD did not exist, (b) self-esteem and academic achievement of students with LD did not improve in inclusive classrooms, (c) Algebra I teachers do not have the knowledge and skills necessary to teach students with LD, and (d) the achievement of students without LD decreased in inclusive classrooms. Related to perceived decrease in achievement, several teachers wrote comments such as, "I do not feel upper level students are challenged when there are several learning disabled students in the class," and, "Most of my class time is spent tending to the needs of my special ed kids. My regular and gifted children don't receive the attention they deserve."

Relationship between Perceptions and Demographic Items

Chi-square test was used to analyze the data to determine the relationships between Algebra I teachers' perceptions of students with LD and the background factors. Significant relationships were found between the Algebra I teachers' perceptions of students with LD and (a) the number of students with LD in the classroom and (b) the amount of collaboration with the special education teacher. Chisquare values and p-values are reported in Table 3 and Table 4. No significant relationships were found between perceptions and teacher experience, highest degree earned, number of college courses taken, and number of workshops attended that addressed teaching students with LD.

| Table 5. Chi-square Results between renceptions and number of Students with L | Table 3. | Chi-square | Results betwe | een Perceptions | and Number o | of Students with L |
|---|----------|------------|---------------|-----------------|--------------|--------------------|
|---|----------|------------|---------------|-----------------|--------------|--------------------|

| Item | Statement | χ^2 | n |
|------|--|----------|----------|
| 1 | I feel comfortable collaborating with the special | 1 856 | ۳ 173 |
| | education teacher | 1.000 | .175 |
| 2 | Inclusion improves the self-esteem of students with LD | 4 351 | 037** |
| 3 | Achievement of general education students is not | 662 | 430 |
| Ũ | decreased by inclusion | .002 | |
| 4 | Adequate resources exist for teaching students with LD | 6 608 | 010** |
| • | in the general education classroom | 0.000 | 1010 |
| 5 | Special education teachers provide adequate support | .149 | .699 |
| • | for students with LD in the general education | | |
| | classroom. | | |
| 6 | Students with LD experience more academic success | 1.115 | .291 |
| | in general education. | | |
| 7 | The time I can devote to state / district curriculum goals | 4.351 | .037** |
| | decreases in inclusive classrooms.* | | |
| 8 | I spend too much time on the behavior management | .287 | .592 |
| | problems of students with LD.* | | |
| 9 | General education teachers have the skills and | 1.088 | .297 |
| | knowledge to teach students with LD. | | |
| 10 | I have adequate time to plan for meeting the needs of | .088 | .767 |
| | students with LD. | | |
| 11 | My pre-service training prepared me to teach students | 3.268 | .071 |
| | with LD. | | |
| 12 | Students with LD have a basic right to be in the general | 2.050 | .152 |
| | education classroom. | | |
| 13 | I do not feel comfortable implementing personalized | .622 | .430 |
| | lesson plans for students with LD.* | 4 700 | 000** |
| 14 | Students with LD lose the stigmas of "dumb," | 4.769 | .029^^ |
| | "different," or a "failure" in the general education | | |
| 45 | classroom. | 4 050 | 100 |
| 15 | I have primary responsibility for teaching all students | 1.958 | .162 |
| 16 | (with or without LD) in my classioon. | 1 1 2 2 | 207 |
| 01 | | 1.133 | .201 |
| | general education classicom. | | |

* These statements were reverse coded.

** Significant at the alpha = 0.05 level

Significant relationships were found between the number of students with LD in the classroom and the responses to four items on the survey. Contrary to the researchers' expectation that teaching fewer students with LD would be associated with a more favorable perception of inclusion, the results showed that Algebra I teachers with six or more students with LD agreed or strongly agreed that: (a) Inclusion improves

the self-esteem of students with LD, (b) adequate resources exist to meet the needs of students with LD, (c) inclusion does not take time away from state curriculum goals, and (d) students with LD lose the stigma of being "dumb," "different," or "a failure" when placed in the general education classroom.

Table 4. Chi-square Results between Perceptions and Amount of Collaboration

| Item | Statement | χ^2 | р |
|------|--|----------|--------|
| 1 | I feel comfortable collaborating with the special education teacher. | 0.224 | .636 |
| 2 | Inclusion improves the self-esteem of students with LD. | 5.740 | .017** |
| 3 | Achievement of general education students is not decreased by inclusion. | 2.405 | .121 |
| 4 | Adequate resources exist for teaching students with LD in the general education classroom. | 9.312 | .002** |
| 5 | Special education teachers provide adequate support for students with LD in the general education classroom. | 7.020 | .008** |
| 6 | Students with LD experience more academic success in general education. | 5.968 | .015** |
| 7 | The time I can devote to state / district curriculum goals decreases in inclusive classrooms.* | 0.018 | .893 |
| 8 | I spend too much time on the behavior management problems of students with LD.* | 1.969 | .161 |
| 9 | General education teachers have the skills and knowledge to teach students with LD. | 2.906 | .088 |
| 10 | I have adequate time to plan for meeting the needs of students with LD. | 2.367 | .124 |
| 11 | My pre-service training prepared me to teach students with LD. | 0.074 | .785 |
| 12 | Students with LD have a basic right to be in the general education classroom. | 7.861 | .008** |
| 13 | I do not feel comfortable implementing personalized learning plans for students with LD.* | 8.485 | .012** |
| 14 | Students with LD lose the stigmas of "dumb," "different," or a "failure" in the general education classroom. | 1.487 | .223 |
| 15 | I have primary responsibility for teaching all students (with or without LD) in my classroom. | 0.215 | .643 |
| 16 | Students with LD feel a sense of belonging in the general education classroom. | 2.697 | .101 |

* These statements were reverse coded.

** Significant at the alpha = 0.05 level

Significant relationships were found between collaboration with special education teachers and the responses to six items on the survey. Algebra I teachers who collaborated at least once every 2 weeks with a special education teacher agreed or strongly agreed that: (a) Inclusion improves self-esteem of students with LD, (b) adequate resources exist to meet the needs of students with LD, (c) adequate support exists from the special education teacher, (d) students with LD experience more academic success in general education, (e) they are comfortable implementing personalized learning plans for students with LD, and (f) students with LD have a basic right to be in the general education classroom.

Discussion

Despite the generally negative perceptions expressed by Algebra I teachers in this study, most agreed that students with LD have a right to be in the general education classroom and that they (the teachers) were comfortable collaborating with the special education teacher to meet the needs of students with LD. Algebra I teachers also agreed that they were responsible for teaching all students (with or without LD) in their classroom. Research is clear that teacher responsibility and ability to collaborate are important for students with LD to be successful in the general education classroom (Monahan, Marino, & Miller, 1996; Taylor, Smiley, & Ramasamy, 2003).

Nonetheless, the Algebra I teachers indicated that there were several areas of concern. They believed that they were not well-trained in teaching students with LD and that they lacked the necessary knowledge and skills needed for teaching students with LD. This finding is consistent with research by others who have reported that general education teachers lack the training for successful inclusion to occur (Buell et al., 1999; Smith & Smith, 2000; DeSimone & Parmar, 2006). It is clear that teacher education programs should do more to prepare beginning teachers for working with included students, and school systems need to provide meaningful professional development workshops with extensive follow-up that will help teachers become more confident and comfortable in their work with students with LD (Idol, 2006).

In addition to the perception that Algebra I teachers lacked adequate preparation to teach students with LD, they reported that there was not enough time to plan for students with LD and not enough time to meet the state curriculum goals. This finding is consistent with studies of general education teachers regarding teaching students with special needs (Huber, Rosenfeld, & Fiorello, 2001; Rose, 2001). It is not surprising that there are concerns among some teachers who believe they need to move quickly through the curriculum in order to teach all the state Algebra I standards, but cannot because of slower pacing needed (or perceived as needed) for some students with LD. If special education teachers were more specialized in content areas (such as algebra) this might help the students with LD learn the content more efficiently and effectively.

The only two background factors that were significantly related to Algebra I teachers' perceptions of inclusion were the amount of collaboration with the special education teacher and the number of students with LD in the general education

classroom. Algebra I teachers who collaborated more frequently had more favorable perceptions of teaching students with LD in inclusive classrooms than did teachers who collaborated less frequently. Research indicates that students with disabilities can make significant academic gains when the general and special education teacher collaborate effectively (Patriarca & Lamb, 1994; Self, Benning, Marston, & Magnusson, 1991). School systems should examine the current collaborative efforts between mathematics teachers and special education teachers to determine if professional development is needed in this area.

Algebra teachers with six or more students with LD had more favorable perceptions of teaching students with LD than teachers with less than six students with LD. Given a greater number of students with LD included in the general education classroom, it is possible that the teacher will have additional resources available to help with instructional needs. This finding needs to be explored further. A limitation of this research is that generalizations of findings may be weak given the small population and low response rate. Future research should be conducted with a larger sample size of Algebra I teachers in order to validate the results.

Implications

Algebra I teachers need to have more effective pre-service coursework in instructional strategies for teaching students with LD. Teacher education programs must provide opportunities for pre-service teachers to observe in classrooms where students with LD are benefiting from effective instruction. In addition, more attention should be given during coursework to instructional strategies that work for all students, including those with LD. Training pre-service teachers to work with students with LD is essential (Avramidis, Bayliss, & Burden, 2000; Maccini & Gagnon, 2006). Hornby (1999) noted that when teachers have been provided with direct training and education they tend to have more positive attitudes toward inclusion.

This study showed that favorable perceptions toward inclusion also could occur when there were collaborative efforts between the special education teachers and the general education teachers. Both groups bring something unique to the classroom. Therefore, more attention should be paid by administrators to ensure that collaborative efforts are available and working effectively. Teachers need to be given time by their administrators to collaborate and develop instructional plans that promote desirable academic outcomes. Professional development in the area of collaboration is needed to help teachers learn ways of working with colleagues to promote these outcomes for all students.

Even with collaborative efforts, Algebra I teachers in this study were concerned about not having enough time to meet state curriculum goals because of students with LD in the classroom. According to Gagnon and Maccini (2007), this can be a significant challenge for teachers. If too much time is expended slowing down instruction to meet the needs of students with LD, curriculum goals may not be met. Therefore, teachers

must receive adequate training on how to meet state curriculum goals in an inclusive classroom.

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Appendix. Survey of Algebra I Teachers' Perceptions of Inclusion

Directions: Please circle the number to the right of each item that best describes your perceptions toward having students with learning disabilities included in your classroom. 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

| 1. I feel comfortable collaborating on all students' learning needs with the special education teacher. | | |
|--|------|--|
| 2. The self-esteem of students with learning disabilities improves when they are instructed full time in general education classrooms. | 4321 | |
| Achievement levels of general education students do not decrease when students with learning disabilities are placed full time in their classrooms. | 4321 | |
| Adequate resources (manipulatives, technology, special education teacher, etc.) exist to meet the needs of students with learning disabilities when they are placed in the general education classroom. | 4321 | |
| Based on my experiences, special education teachers provide an adequate amount of support for students with learning disabilities in the general education classroom. | 4321 | |
| Students with disabilities experience more academic success when they are instructed full time in general education classrooms than when they are instructed in self-contained special education classrooms. | 4321 | |
| When students with learning disabilities are placed full time in the general education classroom, the time I can devote to state / district curriculum goals decreases. | 4321 | |
| I spend too much time on the behavior management problems of students with learning disabilities. | 4321 | |
| General education teachers have sufficient skills and knowledge to teach students with learning disabilities in the general education classroom. | 4321 | |
| 10. I have adequate time to plan for meeting the needs of students with learning disabilities in my classroom. | 4321 | |
| 11. My initial teacher-training program prepared me to teach students with learning disabilities in my classroom. | 4321 | |
| Students with learning disabilities have a basic right to receive their education in the general education classroom. | 4321 | |
| I do not feel comfortable implementing personalized learning plans when students with learning disabilities are placed full time in my classroom. | 4321 | |
| Students with learning disabilities lose the stigma of being "dumb," "different," or "failures" when placed full time in the general education classroom. | 4321 | |
| I have the primary responsibility for the achievement of all students (with and without learning disabilities) in my classroom. | 4321 | |
| 16. Students with learning disabilities feel a sense of belonging when they are placed in the general education classroom. | 4321 | |

Additional Comments

Please provide any additional experiences you would like to share regarding teaching students with learning disabilities in your algebra classroom. (Use the back of this page if needed).